

62. (New) The node of claim 60, wherein a signal which is forwarded from the demultiplexer or filter to one of the spare optical receivers is in the same wavelength band as the optical signals issued by the ordinary transmitter in the pair of an ordinary transmitter and that ordinary receiver, with which the spare receiver is included in a pair.

REMARKS

This is in response to the Office Action dated February 14, 2002. A three month time extension request is hereby made. Claims 1-28 have been canceled, and new claims 29-62 added. Thus, claims 29-62 are now pending.

The originally present claims were rejected under 35 U.S.C. Section 103(a) as being allegedly unpatentable over Takehana in view of at least Horuichi and Miyauchi. New claim 29 clearly defines over the cited art.

New claim 29 requires "a spare transponder connected to receive, for a failure of an ordinary transponder of the at least one node, the first optical signals, which are to be received by the ordinary transponder, and to convert the received first optical signals to issued third optical signals of a well defined wavelength band separate from the wavelength bands of the second optical signals issued by the ordinary transponders in the at least one node, the spare transponder connected to the first optical multiplexer or combiner of the at least one node to provide the third optical signals to the first optical multiplexer or combiner which combines the third optical signals issued by the spare transponder of the at least one node with the second optical signals issued by the ordinary transponders of the at least one node to issue a combined optical signal on the optical

fiber, and wherein said at least one of the nodes further comprises first optical switches, each first optical switch having an input and a first output and a second output, the input of the first optical switch connected to one of the ordinary optical transmitters of the at least one node and the first output connected to that ordinary transponder which is connected to receive the first optical signals issued by said one of the ordinary optical transmitters of the at least one node to forward optical signals received on the input of the first optical switch to that ordinary transponder, and the second output connected to the spare transponder to forward optical signals received on the input of the first optical switch to the spare transponder, depending on a position of the first optical switch." For example, and without limitation, see Fig. 2 of the instant application which illustrates first optical switches 17 and 19, each first optical switch having an input and a first output and a second output, the input of the first optical switch 17 connected to one of the ordinary optical transmitters of the at least one node and the first output connected to that ordinary transponder which is connected to receive the first optical signals issued by said one of the ordinary optical transmitters of the at least one node to forward optical signals received on the input of the first optical switch 17 to that ordinary transponder, and the second output connected to the spare transponder 21 to forward optical signals received on the input of the first optical switch 17 to the spare transponder 21, depending on a position of the first optical switch. The cited art fails to disclose or suggest the aforesaid underlined aspect of claim 29.

Takehana discloses an apparatus including optical transmitters 1-1, 1-2, etc. which send optical signals to transponders 2-1, 2-2, etc., thereby delivering light of different

wavelengths on their output terminals to an optical combiner or multiplexer 8. From the multiplexer, the combined signals pass(es) an amplifier 9 to output fiber 18. Optical dividers 50 (these are not switches) are connected between the transmitters 1-1, 1-2, etc. and the transponders 2-1, 2-2, etc. so as to provide a small portion of the signal to switch 7. The output of switch 7 is fed to auxiliary transponder 2-r, and thereafter to combiner 8.

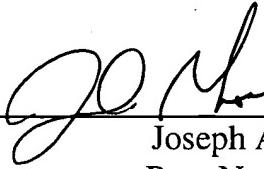
Thus, it can be seen that Takehana fails to disclose or suggest the requirement of claim 29 "each first optical switch having an input and a first output and a second output, the input of the first optical switch connected to one of the ordinary optical transmitters of the at least one node and the first output connected to that ordinary transponder which is connected to receive the first optical signals issued by said one of the ordinary optical transmitters of the at least one node to forward optical signals received on the input of the first optical switch to that ordinary transponder, and the second output connected to the spare transponder to forward optical signals received on the input of the first optical switch to the spare transponder, depending on a position of the first optical switch." Takehana's dividers 50 are not switches, and moreover are not arranged in the manner of the switches recited in claim 29. Citation to additional art cannot overcome the fundamental flaws associated with Takehana.

It is respectfully submitted that all claims are in condition for allowance. If any minor matter remains to be resolved, the Examiner is invited to telephone the undersigned with regard to the same.

Respectfully submitted,

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